



The Mini Canal is ideal for use in front of glazed facades in:

- Offices
- Shop windows
- Industrial workspaces
- Any area where space is at a premium



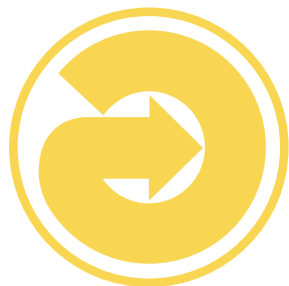
With more than 25 grille options available in aluminium, wood and stainless steel

Delivered fully-assembled, tested and ready to fit

Available in a wide range of sizes, starting at just 90mm deep. The Mini Canal is perfect for providing primary or supplementary heating across multiple storeys or floating floors



Using Jaga's low-mass, low-water content Low-H<sub>2</sub>O heat exchanger, the Mini Canal saves energy costs while remaining ultra-responsive to temperature changes



jaga







# MINI CANAL

maximum heat, minimum recess depth

## Outputs

Outputs in watts at 75/65/20°C, calculated in accordance with EN442 - based upon standard aluminium SNA grille

Depth	Width	Length ▶	1100	1300	1500	1700	1900	2100	2300	2500	2700	2900	3100	3300	3700	4100	4500	4900
90	140		152	190	229	267	304	342	381	419	457	495	533	571	647	723	800	875
	180		180	225	271	316	360	406	451	496	541	586	631	676	767	856	947	1037
	260		237	296	356	415	474	534	593	652	711	771	830	889	1008	1126	1245	1363
	340		307	385	462	538	615	692	769	846	923	1000	1076	1154	1307	1461	1615	1769
110	140		175	218	262	306	349	393	437	480	524	568	612	655	743	830	917	1005
	180		207	259	310	363	414	466	518	569	622	673	725	777	881	984	1087	1191
	260		279	349	420	489	559	629	699	769	839	909	978	1048	1188	1328	1468	1608
	340		363	454	544	636	726	817	908	998	1090	1180	1271	1362	1544	1725	1906	2088
140	140		198	248	298	347	397	446	496	546	595	645	694	744	843	942	1042	1141
	260		345	431	516	603	689	775	861	947	1034	1119	1206	1292	1464	1636	1808	1980
	340		470	587	705	822	940	1057	1175	1292	1409	1527	1644	1762	1997	2232	2467	2702
	420		633	792	950	1108	1267	1425	1583	1742	1900	2058	2217	2375	2692	3008	3325	3642
190	260		392	489	587	685	782	881	978	1076	1174	1271	1370	1467	1663	1859	2054	2250
	340		530	662	795	927	1059	1192	1324	1457	1590	1721	1854	1987	2252	2516	2781	3046
	420		728	909	1091	1273	1455	1637	1819	2001	2182	2365	2547	2728	3092	3456	3820	4184

All dimensions in millimetres.

Please note that other grille options can affect outputs. See opposite page for grille correction factors to be applied to each output (output x correction factor = corrected output).



## Correction Factor Equations

Equation to determine the mean water temperature difference, minus ambient air ( $\Delta T$ )

Equation to determine water mass flow rate (m)

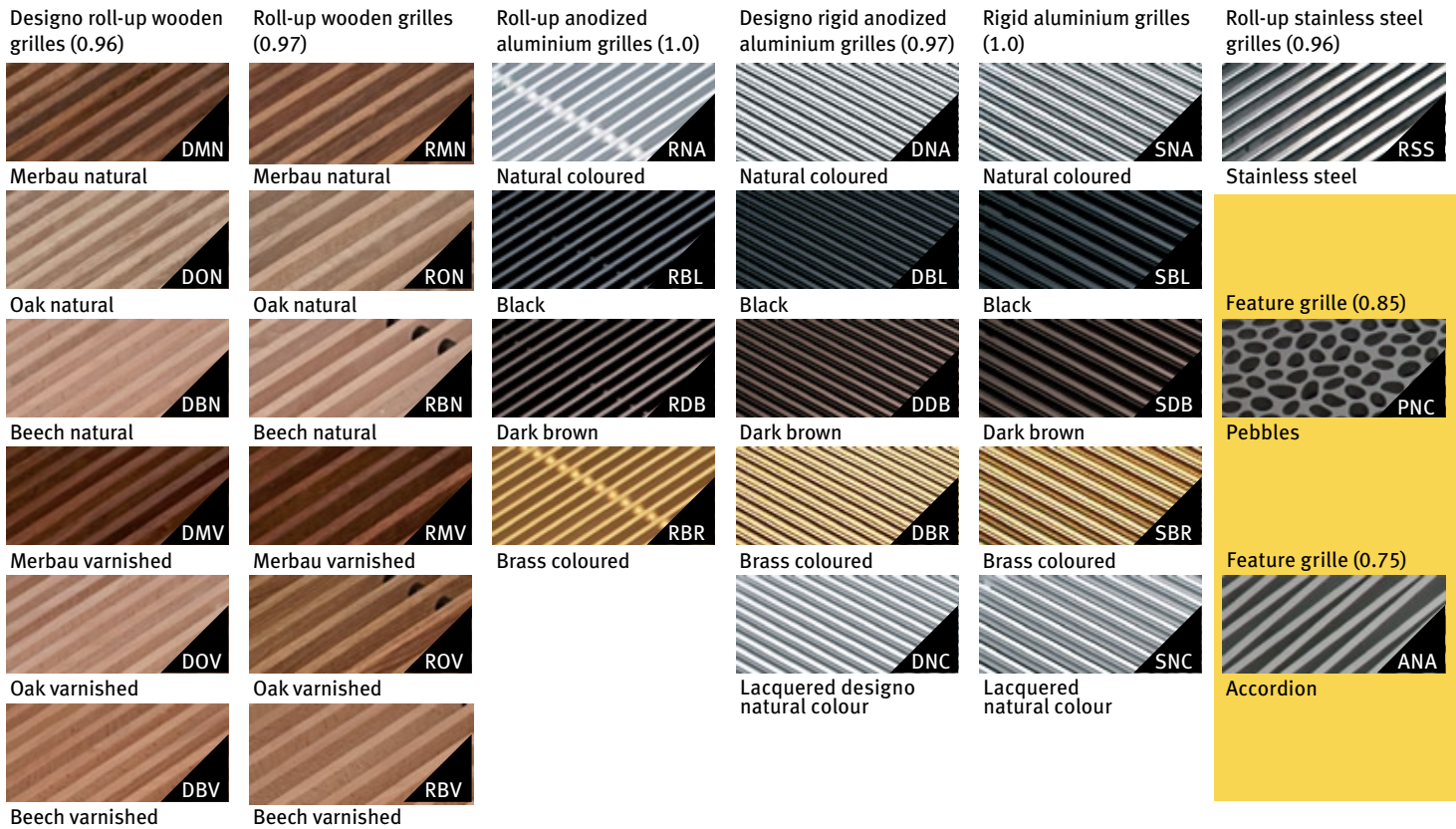
$T_F$  = Water flow temperature °C  
 $T_R$  = Water flow return temperature °C  
 amb = Ambient temperature °C

$Q$  = Total heat emitted by unit (kW)  
 $m$  = Water mass flow rate (kg/s)  
 $C_p$  = Specific heat capacity (4.187 kJ/kg °C) Approximate

$$\text{Equation 1: } \Delta T = \frac{T_F + T_R}{2} - \text{amb}$$

$$\text{Equation 2: } m = \frac{Q}{(T_F - T_R) \times C_p}$$

With output correction factors



3 letter grille codes adjacent to grille images are required for ordering purposes. For Standard outputs, please see Mini Canal output table opposite.

Correction Factors

Outputs at 75/65/20°C, average correction factors calculated in accordance with EN442

TF ▼	TL ▼	TR ▶							
		40	45	50	55	60	65	70	75
80	20	0.74	0.80	0.87	0.93	1.00	1.07	1.14	1.21
	24	0.64	0.70	0.76	0.83	0.89	0.96	1.03	1.10
75	20	0.68	0.74	0.80	0.87	0.93	1.00	1.07	
	24	0.58	0.64	0.70	0.76	0.83	0.89	0.96	
70	20	0.62	0.68	0.74	0.80	0.87	0.93		
	24	0.52	0.58	0.64	0.70	0.76	0.83		
65	20	0.56	0.62	0.68	0.74	0.80			
	24	0.47	0.52	0.58	0.64	0.70			
60	20	0.50	0.56	0.62	0.68				
	24	0.41	0.47	0.52	0.58				
55	20	0.44	0.50	0.56					
	24	0.36	0.41	0.47					
50	20	0.39	0.44						
	24	0.31	0.36						
45	20	0.34							
	24	0.26							

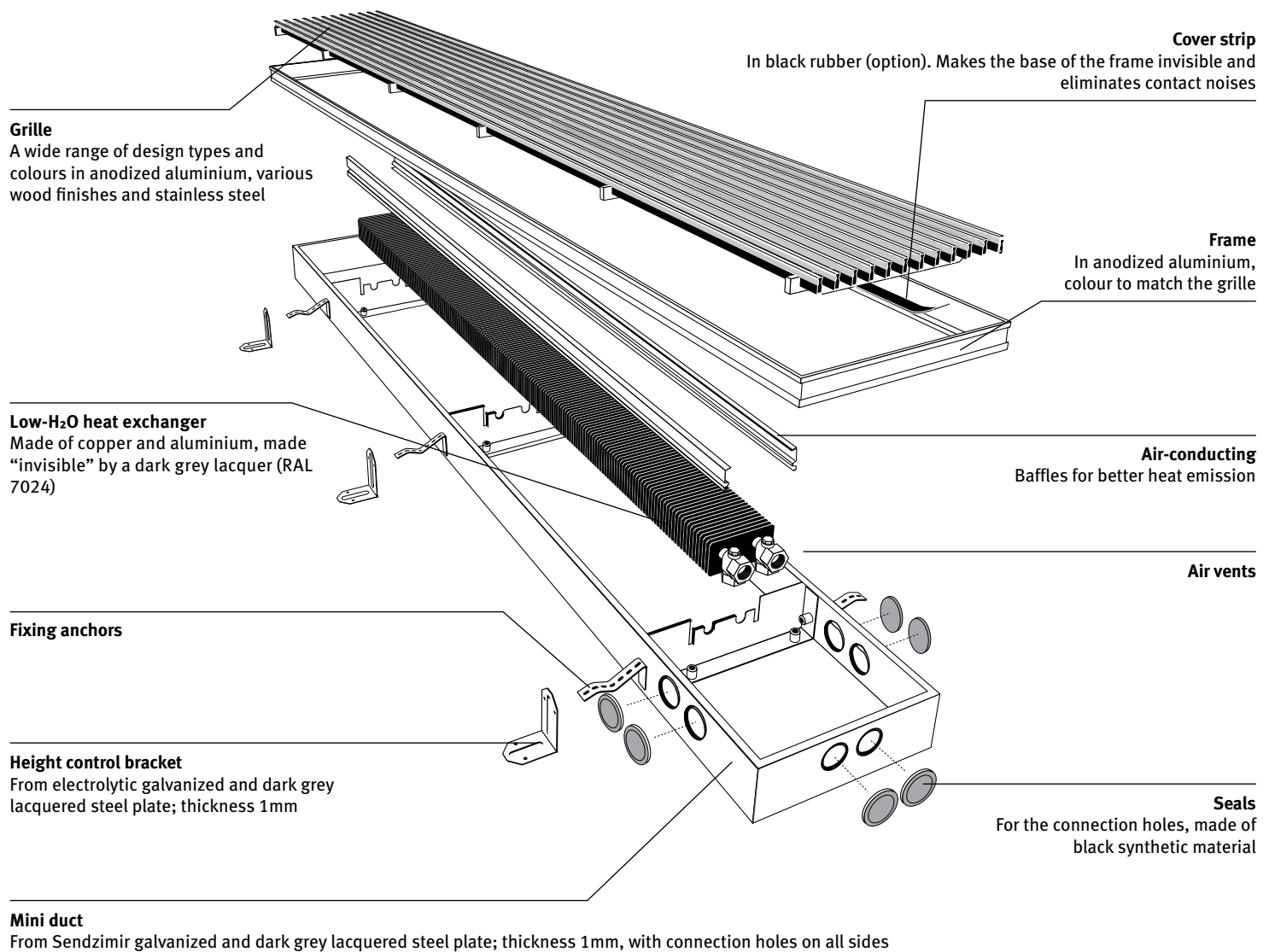


**KEY**  
 TF = Flow temperature °C  
 TR = Return temperature °C  
 TL = Desired air temperature °C

The indicated outputs  $\Delta T$  50 °C are the exact outputs and are calculated in accordance with EN 442. An average correction factor is given in this table for outputs at other  $\Delta T$ , and is applicable for all dimensions. For comprehensive correction factors table see page 82.



# Mini Canal



## Installation

The Mini Canal is factory assembled and ready to install. Suitable for installation onto rough concrete subfloors, in floating or suspended floors, or even into existing trenches.

### Supplied as standard

- Pre-assembled
- Low-H<sub>2</sub>O heat exchanger
- Dark grey lacquered in RAL 7024
- Grille in anodized aluminium
- Frame in the same colour as the grille
- Anchorage elements
- Air vent(s) 1/8"
- Drain cock(s) 1/2"
- Height adjusters

### Installation guide

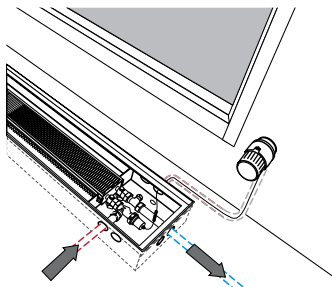
- Position level on the finished floor by means of fixing anchors and height control
- Test the pressure of the installation
- Finish the floor
- Detailed installation instructions are available and supplied with the product

### Control

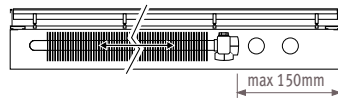
- There are several ways to control the heat exchanger:
- With a central control. Temperature regulators via room thermostat and zone valve
  - With manual valve in the duct
  - With thermostatic valve in the duct: in this case it is best to provide a head with remote control outside the duct. Control is simple and the remote thermostatic head will provide better measurement of the ambient temperature



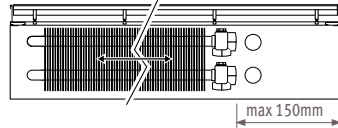
Maximum space for connections



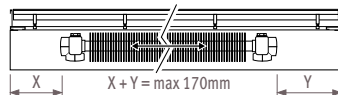
Example with remote controlled head. Suitable for width 260mm and wider.



With same end connection  
Heights 90mm and 110mm

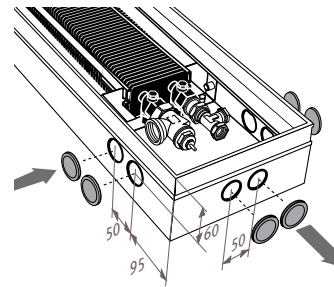


With same end connection  
Heights 140mm and 190mm

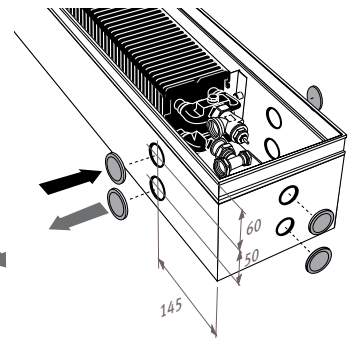


With opposite end connection  
Heights 90mm and 140mm

Connection dimensions



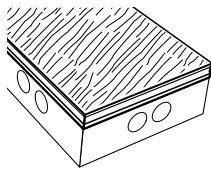
Heights 90mm and 110mm



Heights 140mm and 190mm

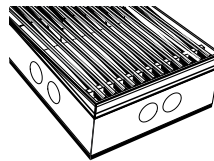
Options

Cover plate



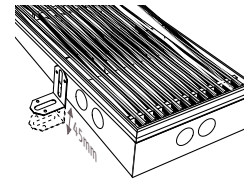
In fibreboard, thickness 22mm. Protects the duct against contamination and damage during construction works.

Base insulation



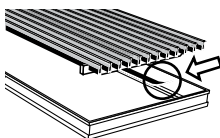
In dark grey polyethylene foam, thickness 5mm.  
Also to avoid transfer of noise when used on upper storeys.

Height Control



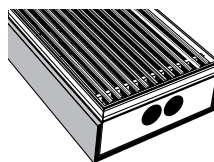
Simple height control for uneven sub-floors.

Cover strip



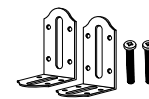
For aluminium and wood grilles. Black adhesive rubber strip, thickness 1mm. To hide the bottom edge of the frame and to avoid contact noises. Order the number of rolls required according to circumference of the frame (width plus length) x 2.

3-Sided insulation



In dark grey polyethylene foam, thickness 5mm.

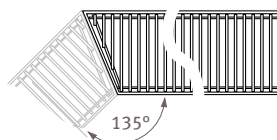
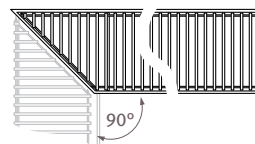
Height Control fittings



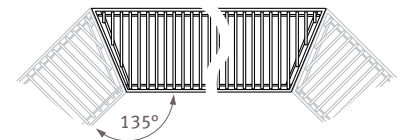
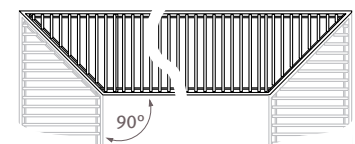
Suggested numbers for length  
1100mm + 1200mm 2 sets  
1300mm > 1900mm 3 sets  
2100mm 4 sets  
2300mm > 3100mm 5 sets  
3300mm > 3900mm 7 sets  
4100mm 8 sets  
4300mm > 4900mm 10 sets

Mitred Corners

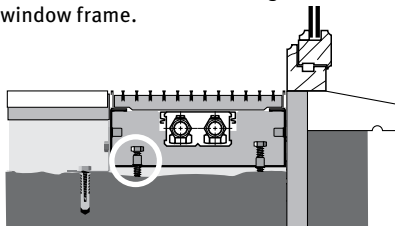
Single corner



Double corner



The height control option is always provided with extra adjusting screws in order to install the duct flat against the window frame.



# Mini Canal

## Product Specifications

### Duct:

Shall be pre-mounted duct in Sendzimir galvanized steel plate of 1mm thick, complete with intermediate support brackets. This will be provided with anthracite grey epoxy polyester finish, RAL 7024 - gloss degree 10%. Specified lengths will comprise of suitable unitary lengths of up to 4900mm. Where longer lengths are required, separate units will be joined to form continuous lengths to suit site requirements.

The duct is to be complete with 6No. pre-perforated holes for pipework accommodation, which are to be covered with black blanking plugs.

The duct is to be of sufficient quality to be provided with the manufacturer's 10 year guarantee.

### Heat Exchanger:

Shall be manufactured from seamless copper tubes, fitted with aluminium fins. The fins shall provide high contact area to the tubes, guaranteeing optimum efficiency across a wide range of flow & return water temperatures. The heat exchanger shall be complete with 2No. Brass 1/2" BSP connections. Generally these shall be same end connections except where specified to the alternative, and be suitable for left or right hand installation.

The complete heat exchanger assembly shall be non corrosive and the whole assembly shall be electro statically lacquered with dirt repellent and dust proof anthracite grey epoxy polyester lacquer RAL 7024- gloss degree 70%.

The heat exchanger shall be supplied complete with 1/8" BSP air vent & 1/2" BSP drain cock, and the whole assembly to be pressure tested to 20 bar, with a maximum working pressure of 10 bar.

The element shall be of sufficient quality to be provided with the manufacturer's 30 year guarantee.

### Frame:

The frame shall be constructed from reinforced L-profile, anodized aluminium, with a height of 31.5mm and a width of 24mm.

The frame shall be pre mounted on the mini floor duct, but will be removable to avoid deformation during installation or floor construction.

The frame shall be supplied to the specified finish and colour. Where a lacquered colour is specified, it shall be lacquered in a scratch resistant epoxy- polyester powder, sprayed electro statically, and baked to 200°C. The colour shall be UV resistant due to ASTM G53. And the frame shall be of sufficient quality to be provided with the manufacturer's 10 year guarantee.

### Grilles:

Grilles shall be of the specified material and finish, and to the relevant specification as follows:

#### Designo Rigid Aluminium Grille:

Shall be constructed from anodized aluminium slats placed lengthways (5 x 16mm), with 8.5mm space between. The slats shall be mechanically connected with crossways supporting slats (5 x 27mm), with maximum 30.5mm space between, and be so constructed to have a free air flow of not less than 62.5%.

#### Rigid Aluminium Grille:

Shall be constructed from anodized aluminium profiled slats placed lengthways (5 x 16mm), with 15mm space between. The slats shall be mechanically connected with two crossways supporting slats (5x 27mm), with maximum 30.5mm space between, and be so constructed as to have a free air flow of not less than 75%.

#### Roll-up Aluminium Grille:

Shall be constructed from anodized aluminium profiled slats placed crossways (5 x 23mm), with 11mm space between. The slats shall be interconnected by a galvanized steel spring, and fixed at the correct distance by aluminium pieces in the same colour, and be so constructed as to have a free air flow of not less than 70%.

#### Roll-up Designo Wooden Grille:

Shall be constructed from wooden profiled slats placed crossways (12 x 24.5mm), with 13mm space between. The slats shall be interconnected by a galvanized steel spring, and fixed at the correct distance by natural coloured aluminium pieces, and be so constructed as to have a free air flow of not less than 52%.

#### Roll-up Wooden Grille:

Shall be constructed from wooden profiled slats placed crossways (12 x 24.5mm), with 20mm space between. The slats shall be interconnected by a galvanized steel spring, and fixed at the correct distance by dark brown synthetic pieces in the same colour, and be so constructed as to have a free air flow of not less than 63%.

#### Roll-up Stainless Steel Grille:

Shall be constructed from V2A 1.4301 stainless steel profiled slats placed crossways (8x 18mm), with 12mm space between. The slats shall be interconnected by a metal spring, with a light grey synthetic coating, and be so constructed as to have a free air flow of not less than 60%.

The grille shall be supplied to the specified finish and colour. Where a lacquered colour is specified for the aluminium grilles, it shall be lacquered in a scratch resistant epoxy- polyester powder, sprayed electro statically, and baked to 200°C. The colour shall be UV resistant due to ASTM G53.

The frame shall be of sufficient quality to be provided with the manufacturer's 10 year guarantee.

### Note:

Each measured trench duct supplied, shall come fully assembled and complete with factory pressure tested heat exchanger, grille, frame and height adjusters, ready to install.



